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Safeguarding patients through good numeracy skills

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Safeguarding patients through good numeracy skills

All healthcare professionals encounter numbers in a wide variety of situations during their practice.

Nurses, Operating Department Practitioners (ODPs) and all healthcare professionals, need to be confident in their ability to work with numbers, to ensure patient safety at all times and particularly when administering medicines – indeed numerical competence is a fundamental component for registration with the respective professional bodies.

It is the responsibility of all NMC Approved Educational Institutions (AEIs) to ensure that students undertaking healthcare courses have sufficient literacy and numeracy skills to complete the required academic and practical components of their chosen course (McCollum & Rogers 2013). Periodically, the NMC will revise and update their published standards for safe practice in the management and administration of medicines by registered nurses, midwives and specialist community public health nurses; therefore it is essential that all students and registered practitioners are aware of the current standards, as failure to comply with the standards can affect patient safety and wellbeing, and risk a practitioner's professional registration (or a student's future registration). All drug calculations performed by nursing students must be fully checked by a registered nurse prior to administration.

Time and again the media report on and publicise tragedies and near-misses that are attributed to "drug errors" when, in many situations, such drug errors are specifically due to human error. The majority of medication errors can usually be attributed one of three types of human error: (1) the wrong medication being administered,

(2) missed or delayed administration of medication, or (3) administration of the wrong dose of drug – which is most frequently due to calculation error (Rogers & Hutton 2017), and is often attributed to inadequate numeracy skills to accurately calculate a drug dose. The repercussions of such professional failures can have catastrophic consequences for patient safety and wellbeing.

Some calculations in healthcare are complex and require the practitioner to perform detailed and systematic numerical operations – generally, the more steps required in a calculation increases the potential risk of error. It is important that professionals working in areas requiring complex calculations are confident and regularly practice their skills for completing such calculations. In addition to practicing your calculation skills, it is always recommended that when performing calculations (particularly when working on complex calculations) that healthcare practitioners try to focus on the task of the drug calculation, ignore distractions, and check through your own working-out when finished. Full attention and concentration for all aspects of the medicine's calculation and administration should help to reduce the potential risk of errors. Furthermore, the NMC recommends that all complex calculations are "double-checked" (or second-checked). This involves each registered nurse, or ODP, independently working through the calculation and then comparing their answers together. Once the calculation answer has been cross-checked and agreed, it is important to consider the value in the clinical context, this

means you should ask yourself the question: based on your clinical knowledge does this answer make sense (Rogers & Hutton 2017)?

In this issue, the Open Learning Zone offers some insight into the calculations required to determine infusion rates. Recommendations in the article reiterate the importance of practicing general calculation skills, as well as working with examples that are relevant to your specific area of practice.

We are all familiar with the concept of "practice makes perfect" and it applies to numeracy skills just as easily as it applies to learning an instrument or a language. All healthcare professionals, irrespective of their area of expertise, should regularly practice their general calculation skills as well as any specialised calculations that are specific to their area of practice. Through regular relevant practice, self-checking and double-checking with colleagues, all healthcare professionals can help to reduce the likelihood of drug errors occurring in their practice and maintain the safety and wellbeing of patients in their care at all times.

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